ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2000

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

0604766A Tactical Exploitation of National Capabilities (TENCAP) - Engineering & Manufacturing Development (TIARA)

					•	• •				
	COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	42025	71879	57419	76674	71545	65355	65395	Continuing	Continuing
D909	Tactical Exploitation of National Capabilities (TENCAP) - Engineering Development (TIARA)	42025	71879	44503	46748	43926	59554	59395	Continuing	Continuing
D957	Tactical Exploitation System (TES) (TIARA)	0	0	12916	29926	27619	5801	6000	Continuing	Continuing

A. <u>Mission Description and Budget Item Justification</u>: This project supports the engineering development, enhancement, and sustainment of the Tactical Exploitation System (TES), Division TES (DTES), Advanced Electronic Processing Dissemination System (AEPDS), Mobile Integrated Tactical Terminal (MITT), and Forward Area Support Terminal (FAST). The Army's TES incorporates the standards and protocols dictated by the Common Imagery Ground/Surface System (CIG/SS) program. TES brings all of the existing and emerging Army TENCAP capabilities (AEPDS, Modernized Imagery Exploitation System (MIES), and Enhance Tactical Radar Correlator (ETRAC)) into an integrated common baseline that is downsized, modular and scaleable to meet a wide range of contingency requirements. DTES will replace the MITT. TENCAP Common Baseline addresses common subsystems, planned improvements, key activities and ongoing/planned initiatives determined to have potential application to multiple TENCAP systems. MIES, ETRAC, and the CIG/SS portion of TES are funded under PE 0305208A. Specific details are provided in the Tactical Intelligence and Related Activities (TIARA) Congressional Budget Justification Book, Vol. II.

B. Program Change Summary	FY 1999	FY 2000	FY 2001
Previous President's Budget (<u>FY 2000/2001</u> PB)	43950	70940	57008
Appropriated Value	44674	72440	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-724		
b. SBIR / STTR	-1647		
c. Omnibus or Other Above Threshold Reductions		-298	
d. Below Threshold Reprogramming	-26		
e. Rescissions	-252	-263	
Adjustments to Budget Years Since FY 2000/2001 PB			+411
Current Budget Submit (<u>FY 2001</u> PB)	42025	71879	57419

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Exhibit R-2 (PE 0604766A)

	,	ARMY RDT&E BUDGET IT	EM JUS	TIFICAT	ΓΙΟΝ (R-	-2A Exh	ibit)		DATE Fe	bruary 20	000
BUDGET / 5 - En (-	g and Manufacturing Developr	nent	06 Ca	pabilities	TITLE Factical E (TENCA ing Deve	P) - Engi	ineering a			PROJECT D909
		COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
		ation of National Capabilities (TENCAP) - velopment (TIARA)	42025	71879	44503	46748	43926	59554	59395	Continuing	Continuin
improver portion o Book, Vo	ments, key a of TES are followe II and Accomplise 15510 3500 17772	Continued software upgrades and enhance such as integration of communications can commander with enhanced battlefield intengineering development and integration Manager (SIDEARM), Defense Messagi Began engineering development of Tactic Commanders. Continued engineering development of Tactic (MIDAS), Dissemination Element (DE), COTs/GOTs government furnished equipment of Tactic Continued engineering development of Tactic (MIDAS), Dissemination Element (DE), COTs/GOTs government furnished equipment of Tactic Continued engineering development of Tactic Continued engineering eng	etermined to less are provided (JMIP) Congruents for the apabilities to a telligence produced System (Educal SIGINT FORES #1, include Common Impment (GFE).	have potential in the Tactivessional Burner erefinement meet changing ducts. In additional Edward in Situation Edward in Theoreessor (Taling integral agery Processor	al application tical Intellige dget Justifica at of the TEN ng architectural dition to stay bisplay (GSD ENCAP syste SP) for integ tion of existing ssor (CIP), C	n to multiple ence and Relation Book, Varion	TENCAP sented Activition on Baseline ementation with national and Imagery Diese to provide components of a Link (CDL)	to fully explored software at land theater issemination the critical into the critical into the critical into the critical into the property and the property and the property is the critical into the property and the property is the critical into the property and the property is the critical into th	est, ETRAC, Congression oit national appliqué to p capabilities, Environment elligence data rized Data Aurchase and i	and the CIC al Budget Ju and theater c rovide the of this effort in t And Resou ta to Tactical cquisition S ntegration of	apabilities perational necluded arce
• Total	5243 42025	Continued support to TENCAP program Topographic Engineering Center (TEC))		and admini	strative activ	rities (e.g. FF	RDC (Aeros	space), ARL	support, AS	PO support,	Army
LOTOI											·

	-	ARMY RDT&E BUDGET ITEM JUST	IFICATION (R-2A Exhibit)	DATE February 2000
BUDGET A 5 - Eng		g and Manufacturing Development	PE NUMBER AND TITLE 0604766A Tactical Exploit Capabilities (TENCAP) - Er Manufacturing Developme	ngineering &
FY 2000	Planned P	Program:		
•	16672	Continue software upgrades and enhancements for the r such as integration of communications capabilities to m commander with enhanced battlefield intelligence produ- engineering development and integration of Generic Ar (FDFI), and integration of SCI DMS into TENCAP syst	eet changing architectures and implementati acts. In addition to staying current with national ea Limitation Environment (GALE), improv	on of software appliqué to provide the operation and theater capabilities, this effort includes
•	7313	Continue engineering development of Tactical SIGINT Commanders		provide critical intelligence data to Tactical
•	7052	Develop prototype Division TES (DTES)		
•	11830	Complete engineering development of TES #1, including integration of COTs/GOTs GFE.	ng integration of existing reusable componen	ts (i.e. MIDAS, DE, CIP) and the purchase and
•	19496	Initiate engineering development of TES #2, including integration of COTs/GOTs GFE. (Majority of this effort		(i.e. MIDAS, DE, CIP) and the purchase and
•	6666	Continue support to TENCAP program management an Topographic Engineering Center (TEC)).	d administrative activities (e.g. FFRDC (Aer	rospace), ARL support, ASPO support, Army
•	1500	Initiate transition engineering of Semi-Automated IMIN design of downsized SAIP for integration within TES.	VT Processing (SAIP) from ACTD residual to	o operational configuration, including prelimina
•	1350	Initiate modification of TES to receive Tactical Downli	nk to provide time critical direct support to d	leep operations and deep targeting.
Total	71879			
FY 2001	Planned P			
•	18856	Continue software upgrades and enhancements for the resuch as integration of communications capabilities to me commander with enhanced battlefield intelligence producing inversing development and integration of intelligence simulations; engineering development of downsized contained development of system upgrades to leverage and experience of the contained of t	eet changing architectures and implementati ucts. In addition to staying current with nation e models of actual TENCAP systems and pro- mponents to receive national broadcast on su- reploit commercial imagery in TES.	on of software appliqué to provide the operation on all and theater capabilities, this effort includes ducts for use in Warfighter demonstrations and naller platforms (desktop and laptop computers)
•	8000	Complete engineering development of Tactical SIGINT Commanders	Processor (TSP) for integration into TES to	provide critical intelligence data to Tactical
•	4037	Complete engineering development of TES #2, includir integration of COTs/GOTs GFE.	ng integration of existing reusable componen	ts (i.e. MIDAS, DE, CIP) and the purchase and
•	6500	Continue modification TES to receive Tactical Downlin	nk to provide time critical direct support to de	eep operations and deep targeting.
Project D	909		Page 3 of 9 Pages	Exhibit R-2A (PE 0604766A)

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

DATE

February 2000

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

PROJECT **D909**

0604766A Tactical Exploitation of National Capabilities (TENCAP) - Engineering & Manufacturing Development (TIARA)

FY 2001 Planned Program: (continued)

• 500 Complete development of prototype Division TES (DTES)

• Continue support to TENCAP program management and administrative activities (e.g. FFRDC (Aerospace), ARL support, ASPO support, Army Topographic Engineering Center (TEC)).

Total 44503

B. Other Program Funding Summary	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	То	Total
								<u>Compl</u>	Cost
RDTE, A Budget Activity 5									
PE 0604766A TENCAP Project D957 (TIARA)			12916	29926	27619	5801	6000	Cont	Cont
RDTE, A Budget Activity 7									
PE 0305208A (JMIP)	8585	8004	7894	8212	8288	8445	8676	Cont	Cont
Other Procurement Army, OPA-2									
BZ7315 TENCAP (TIARA)	6033	4350	12853	3839	4382	1977	1975	Cont	Cont
BZ7316 CIG/SS (JMIP)	2487	2778	2833	2599	2610	2653	2714	Cont	Cont
BZ7317 Tactical Surveillance System (TIARA)			·	22228	11166	31744	9969	Cont	Cont

C. Acquisition Strategy: As pioneers in streamlined acquisition, ASPO's success in delivering systems as those described above to warfighters can be directly attributed to an environment emphasizing stable funding, low density acquisition, minimal use of MILSPECS, and managed competition. By tailoring existing technology, leveraging the best commercial practices and using commercial and government-off the shelf software, ASPO minimizes risk while maximizing efficiency. Finally, Government and contractor personnel and facilities accomplish dedicated cradle to grave Integrated Logistics Support (ILS) for TENCAP systems through a coordinated effort.

D. Schedule Profile	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Initiate migration of JTT into AEPDS and TES	2 nd QTR						
Complete integration of GBS into AEPDS and	4 th QTR						
TES							
Complete Eng. Development of TES-Forward	4 th QTR						
Complete Eng. Development of TES-Main		4 th QTR					
Complete development and integrate TSP into TES			4 th QTR				
Complete development of TES #2			4 th QTR				
Complete development of DTES prototype			3 rd QTR				

Project D909 Pages Exhibit R-2A (PE 0604766A)

ARMY RDT&E BUDG	ET ITE	M JUST	IFICATI	ON (R-2	2A Exhi	bit)		February 2000
BUDGET ACTIVITY 5 - Engineering and Manufacturing Do	evelopme	ent	060 Cap	MBER AND T 4766A Ta abilities aufacturir	actical E			
D. Schedule Profile	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	
Initiate integration of Phased Array Antenna into TENCAP systems.				2 nd QTR				
Complete integration of Phased Array Antenna into TENCAP systems					3 rd QTR			
Initiate Future Imagery Architecture integration into TENCAP Systems						2 nd QTR		
Initiate SAIP integration into TENCAP systems						3 rd QTR		
Integrate GBS/JBS into TENCAP systems							3 rd QTR	
Project D909			Page 5 of 9	Pages			Exhibit	R-2A (PE 0604766A)

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DATE **ARMY RDT&E COST ANALYSIS (R-3)** February 2000 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - Engineering and Manufacturing Development 0604766A Tactical Exploitation of National D909 Capabilities (TENCAP) - Engineering & **Manufacturing Development (TIARA)** I. Product Development Performing Activity & FY 2000 Contract Total FY 1999 FY 1999 FY 2000 FY 2001 FY 2001 Cost To Total Target PYs Cost Method & Location Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract TES #1 Prototype * C/CPAF CLASSIFIED 47766 17772 11/98 11830 11/99 0 77368 Common Baseline ** SS/CPAF CLASSIFIED N/A 15510 1/99 16672 2/00 18856 2/01 51038 Cont TSP SS/CPAF CLASSIFIED 143 3500 12/98 7313 11/99 8000 11/00 0 18956 TES #2 EDM* CLASSIFIED 23533 SS/CPAF 0 19496 3/00 4037 0 DTES Prototype SS/CPAF CLASSIFIED 0 7052 4/00 500 11/00 0 7552 0 3/00 23000 30850 TDL Collector TBD TBD 1350 6500 1/01 SAIP Prototype Study **TBD TBD** 0 1500 2/00 1500 Subtotal Product 47909 36782 37893 210797 65213 23000 Development: Remark: * TES development is also partially funded under PE 0305208A and PE 0604766A Project D957. ** Common Baseline addresses common subsystems, planned improvements, key activities, and ongoing/planned initiatives determined to have potential application to multiple TENCAP systems (including MIES, ETRAC, and TES that have funding under PE 0305208A) FY 2000 FY 2001 FY 2001 II. Support Costs Contract Performing Activity & Total FY 1999 FY 1999 FY 2000 Cost To Total Target Method & Location PYs Cost Cost Award Cost Award Complete Cost Value of Cost Award Contract Type Date Date Date a. System Engineering N/A TEC. Alexandria VA Cont 1235 1603 12/99 1649 Cont 4487 (Government) ASPO In-house N/A ASPO, Alexandria, 2533 9/00 3564 9628 Cont 3531 Cont VA FFRDC **CPAF** Aerospace Corp, 1475 1532 12/99 1397 Cont 4404 Cont LAAFB, CA Subtotal Support Costs: 5243 6666 6610 18519 III. Test and Evaluation: Not applicable IV. Management Services: Not applicable Project Total Cost: 47909 42025 71879 44503 23000 229316 Project D909 Page 6 of 9 Pages Exhibit R-3 (PE 0604766A)

ARMY RDT&E BUDGET ITE	EM JUS	TIFIC	ATIO	ON (R-	2A Exhi	ibit)		DATE Fe	February 2000	
BUDGET ACTIVITY 5 - Engineering and Manufacturing Developm									PROJECT 0957	
COST (In Thousands)	FY1999 Actual	FY 200 Estima		FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D957 Tactical Exploitation System (TES) (TIARA)	0		0	12916	29926	27619	5801	6000	Continuing	Continuing

A. <u>Mission Description and Budget Item Justification</u>: This project supports the engineering development and enhancement of the Tactical Exploitation System (TES). The Army's TES will incorporate the standards and protocols dictated by the Common Imagery Ground/Surface System (CIG/SS) program. TES brings all of the existing and emerging Army TENCAP capabilities (AEPDS, MIES, and ETRAC) into an integrated common baseline; downsized, modular and scaleable to meet a wide range of contingency requirements. The CIG/SS portion of TES is funded under PE 0305208A. Specific details are provided in the Tactical Intelligence and Related Activities (TIARA) Congressional Budget Justification Book, Volume II and the Joint Military Intelligence Program (JMIP) Congressional Budget Justification Book, Vol. II.

FY 1999 Accomplishments: Effort was funded under project D909 of this PE in FY 1999.

FY 2000 Planned Program: Effort is funded under project D909 of this PE in FY 2000.

FY 2001 Planned Program:

- 750 Provide program management support to Semi Automated Imagery Processor (SAIP) activities.
- Complete engineering development of TES #2, including integration of existing reusable components (i.e. MIDAS, DE, CIP) and the purchase and integration of COTs/GOTs GFE. This effort was started under Project D909 in FY 2000.
- 4370 Initiate engineering development of TES #3, including integration of existing reusable components (i.e. MIDAS, DE, CIP) and the purchase and integration of COTs/GOTs GFE

Total 12916

Project D957 Page 7 of 9 Pages Exhibit R-2A (PE 0604766A)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

DATE

February 2000

BUDGET ACTIVITY

5 - Engineering and Manufacturing Development

PE NUMBER AND TITLE

PROJECT **D957**

0604766A Tactical Exploitation of National Capabilities (TENCAP) - Engineering & Manufacturing Development (TIARA)

B. Other Program Funding Summary	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	То	Total
								Compl	<u>Cost</u>
RDTE, A Budget Activity 5									
PE 0604766A TENCAP Project D909 (TIARA)	42025	71879	44503	46748	43926	59554	59395	Cont	Cont
RDTE, A Budget Activity 7									
PE 0305208A (JMIP)	8585	8004	7894	8212	8288	8445	8676	Cont	Cont
Other Procurement Army, OPA-2									
BZ7315 TENCAP (TIARA)	6033	4350	12853	3839	4382	1977	1975	Cont	Cont
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BZ7317 Tactical Surveillance System (TIARA)				22228	11166	31744	9969	Cont	Cont

C. Acquisition Strategy: As pioneers in streamlined acquisition, ASPO's success in delivering systems as those described above to warfighters can be directly attributed to an environment emphasizing stable funding, low density acquisition, minimal use of MILSPECS, and managed competition. By tailoring existing technology, leveraging the best commercial practices and using commercial and government-off the shelf software, ASPO minimizes risk while maximizing efficiency. Finally, Government and contractor personnel and facilities accomplish dedicated cradle to grave Integrated Logistics Support (ILS) for TENCAP systems through a coordinated effort.

D. Schedule Profile	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Complete development of TES #2			4 th QTR				
Complete development of TES #3				4 th QTR			
Complete development of TES #4						4 th QTR	
Complete development of TES #5							4 th QTR

Project D957 Page 8 of 9 Pages Exhibit R-2A (PE 0604766A)

	AF	RMY RDT&E CO	OST AN	IALYS	IS (R-3)			DA		uary 200	00
BUDGET ACTIVITY 5 - Engineering and	Manufact	uring Developme	nt	06 Ca	UMBER AND 04766A pabilitie Inufactu	Tactica s (TENC	ing &	tional		PROJECT D957		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. TES #2 EDM * b. TES #3 EDM * Subtotal Product	SS/CPAF SS/CPAF	CLASSIFIED CLASSIFIED						7796 4370 12166	11/00 3/01	*	7796 4370 12166	
Development: Remark: * TES development is	also partially fu	Inded under PE 0305208A	and PE 0604	1766A Proje	ect D909.							
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a. System Engineering (Government)	N/A	TEC, Alexandria, VA			Bute		Bute	400	Bute	Cont	Cont	Contrac
b. Contractor Subtotal Support Costs:	SS/FF	Classified						350 750		Cont	Cont	
III. Test and Evaluation: Not ap IV. Management Services: Not Project Total Cost:	•							12916		Cont	Cont	
Project D957				Page 9 oj	f 9 Pages				Exhibit R-	·3 (PE 060 ₄	4766A)	

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